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(54) UTILIZATION OF FULLERENE CARBON IN CURABLE RUBBER COMPOUND

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain a light-weight tire having improved rubber dynamic properties by mixing a diene elastomer with a carbon black reinforcement at least partially replaced by fullerene or used in combination therewith.

SOLUTION: 100 pts. wt. at least one diene elastomer is mixed with about 30 to 100 pts. wt. elastomer reinforcement comprising at least one member selected among about 5 to 100wt. % at least one fullerene carbon having C<sub>2n</sub> (wherein n is an integer of at least 30), 0 to about 95wt. % carbon black and precipitated silica. The fullerene carbon is any fullerene having at least one coanulene ring structure or an entity containing corrannulene ring structure. The fullerene carbon of this kind usually has a specific gravity of about 1.2 to about 1.7. A tire made from the rubber composition containing the fullerene is excellent in a balance between rolling resistance and tread wear resistance.

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